

Radio and Television Broadcasting

(SIC 483)

SIGNIFICANT POINTS

- Keen competition is expected for many jobs due to the large number of jobseekers attracted by the glamour of this industry.
- Many entry-level positions are at smaller stations, where an employee may perform several different job functions.
- Except for news, relatively few workers in this industry are involved in the production of television programs because most are pre-recorded by the motion picture industry.

Nature of the Industry

This industry consists of radio and television stations that broadcast programs free of charge to the public. Broadcast signals travel over the airwaves from a station's transmission tower to the antennas of television sets and radios; personal computers can also be equipped to receive the transmissions. Anyone in the signal area with a radio, television, or properly equipped personal computer can receive the programming. Television broadcasts carried on cable and other pay television systems are classified in a separate industry. (The statement on cable and other pay television services appears elsewhere in the *Career Guide*.)

Radio and television stations broadcast a variety of programs, such as national and local news, talk shows, music programs, movies, other entertainment, and advertisements. Broadcast stations produce some of these programs in their own studios, notably news programs; however, much of the programming is produced outside the broadcast industry. Establishments which produce programming for radio and television stations—but which do not broadcast the programming—are classified in the amusement and recreation services industry and the motion picture industry. (Statements on amusement and recreation services and motion picture production and distribution appear elsewhere in the *Career Guide*.)

Radio and television stations broadcast programs free of charge; owners of radios and television sets do not pay broadcasters to receive programming. Revenue for commercial radio and television stations comes from the sale of advertising time during selected programs. The rates paid by advertisers depend on the size and characteristics of the program's audience, and the time of day the program is broadcast. Revenue for educational and non-commercial stations primarily comes from donations, foundations, government, and corporations. These stations are generally owned and managed by public broadcasting organizations, religious institutions, or school systems.

Changes in government regulation and technology are affecting the broadcast industry. The Telecommunications Act of 1996 relaxed ownership restrictions, resulting in an increased number of consolidations among broadcast stations. The Federal Communications Commission (FCC), the government agency responsible for regulating the broadcast industry, also is encouraging the development of low-powered broadcast stations. These stations are relatively inexpensive

to establish, making it easier for community, religious, and educational groups to broadcast in their local areas.

The FCC is also a proponent of digital television (DTV), a technology that uses digital signals to transmit television programs. Digital signals consist of pieces of simple electronic code that can carry more information than conventional signals. A growing number of television stations are implementing digital broadcasting. This allows for the transmission of higher resolution pictures, referred to as high definition television (HDTV).

Broadcasters can use digital technology to transmit a single HDTV broadcast or they can multicast several conventional broadcasts. Multicasting is the transmission of more than one signal on a given channel. For example, a broadcast station could transmit a sporting event from several different camera angles on the same channel. Viewers would then be able to select which view their television set receives.

Digital broadcasting can transmit a variety of information besides television programming. For example, viewers with access to DTV could obtain electronic newspapers, computer software, telephone directories, and any other information that can be translated into digital code.

Working Conditions

Most employees in this industry work in clean, comfortable surroundings in broadcast stations and studios. Some employees work outside the broadcast studio, however, under less favorable conditions.

News teams made up of reporters, camera operators, and technicians travel in electronic news gathering trucks to various locations to cover news stories. Although such location work is exciting, assignments such as reporting on natural disasters may present danger. These assignments may also require outdoor work under adverse weather conditions.

Camera operators working on such news teams must have the physical stamina to carry and set up their equipment. Technicians on electronic news gathering trucks must insure that the mobile unit's antenna is correctly positioned in order to avoid electrocution from power lines. Field service engineers work on outdoor transmitting equipment and may have to climb poles or antenna towers; their work can take place under a variety of weather conditions. Broadcast technicians who maintain and set up equipment may have to do heavy lifting.

News, programming, and engineering employees work under a great deal of pressure in order to meet deadlines. As a result, these workers are more likely to experience varied or erratic work schedules than are sales and administrative workers.

For many people, the excitement of working in broadcasting compensates for the demanding nature of the jobs. Although this industry is noted for its high pressure, the work is not hazardous. The rate of occupational illness and injury in broadcasting is much lower than the average for all industries. In 1997, cases of work-related injury and illness averaged only 1.8 per 100 full-time workers in radio and television broadcasting, significantly lower than the rate of 7.1 per 100 for all private industry.

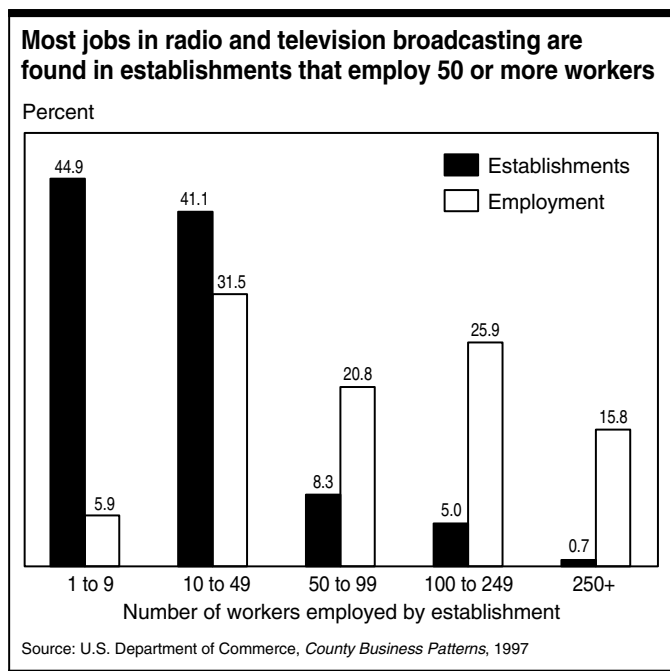
Employment

The radio and television broadcasting industry provided 247,000 wage and salary jobs in 1998. Of this total, 116,000 were in radio broadcasting, and 131,000 were in television broadcasting. Most jobs were in large establishments; more than 60 percent of the jobs were in establishments with over 50 employees (chart). Radio and television broadcasting establishments are found throughout the country, but jobs in larger stations are concentrated in large cities.

Occupations in the Industry

Occupations at large broadcast stations fall into five general categories: Program production, news-related, technical, sales, and general administration. At small stations, jobs are less specialized and employees often perform several functions. Although on-camera or on-air positions are the most familiar occupations in broadcasting, the majority of employment opportunities are behind the scenes (table 1).

Program production occupations. Most television programs are produced by the motion picture industry; actors, directors, and producers working on these pre-recorded programs are not employed by the television and radio broadcast industry.



Program production occupations at television and radio stations create programs such as news and talk shows and musical programming.

Production assistants help the producer create the program. They provide clerical and research assistance; assist with the preparation of musical, written, and visual materials; and time the production to make sure it does run over schedule. They may also operate cameras and other audio and video equipment.

Video editors select and assemble pre-taped video, including sound and special effects, to create a finished program. Conventional editing requires assembling pieces of videotape to create a finished product in a linear fashion. The editor first assembles the beginning of the program, and then works sequentially towards the end. Newer computerized editing allows an editor to electronically cut and paste video segments. This technique is known as non-linear editing because the editor is no longer restricted to working sequentially; a segment may be moved at any time to any location in the program.

Producers plan and develop live or taped productions, determining how the show will look and sound. They select the script, talent, sets, props, lighting, and other production elements. They also coordinate the activities of on-air personalities, production staff, and other personnel. *Website or Internet producers*, a relatively new occupation in the broadcast industry, plan and develop Internet sites that provide news updates, program schedules, and information about popular shows. The website producer decides what will appear on the site and is responsible for its overall design and maintenance.

Announcers make news announcements and provide other information such as program schedules and station breaks for commercials or public service information. *Disc jockeys* announce recorded music on radio stations and may take requests from listeners, interview guests, and may comment on the music, weather, or traffic. They often select the music to be played and may operate tape machines, CD players, and transmitter equipment, especially in smaller stations. Announcers and disc jockeys need a good speaking voice; disc jockeys also need knowledge of music.

Program directors are in charge of on-air programming in radio stations. Program directors decide what type of music will be played, supervise on-air personnel, and sometimes select the specific songs and order in which they will be played. Considerable experience, usually as a disc jockey, is required, as well as a thorough knowledge of music.

News-related occupations. News, weather, and sports reports are important to many television stations because they attract a large audience. Many radio stations depend on up-to-the-minute news for a major share of their programming. Program production occupations, such as producers and announcers, also work on the production of news programs.

Reporters and *correspondents* gather information from various sources, analyze and prepare news stories, and report on the air. *Correspondents* report on news occurring in the large U.S. and foreign cities where they are stationed. *Newswriters* edit and write the news stories from information collected by reporters; newswriters may advance to positions as reporters or correspondents.

Newscasters, also known as *news analysts* or *news anchors*, analyze, interpret and broadcast news received from various sources. News anchors present news stories and introduce

videotaped news or live transmissions from on-the-scene reporters. Newscasters at large stations may specialize in a particular field. *Weathercasters*, also called weather reporters, report current and forecasted weather conditions. They gather information from national satellite weather services, wire services, and local and regional weather bureaus. Some weathercasters are trained *meteorologists* and can develop their own weather forecasts. *Sportscasters* are responsible for reporting sporting events. They usually select, write, and deliver the sports news for each newscast.

Assistant news directors supervise the newsroom; they coordinate wire service reports, tape or film inserts, and stories from individual newswriters and reporters. *Assignment editors* assign stories to news teams, sending them on location if necessary.

News directors have overall responsibility for the news team of reporters, writers, editors, and newscasters as well as studio and mobile unit production crews. This senior administrative position has responsibilities that include determining events to be covered, and how and when they will be presented in a news broadcast.

Technical occupations. Employees in these occupations operate and maintain the electronic equipment that records and transmits radio or television programs. The titles of some of these occupations use the terms “engineer,” “technician,” and “operator” interchangeably.

Broadcast and sound technicians operate equipment that regulates the signal strength, clarity, and range of sounds and colors of broadcasts. *Audio control engineers* operate equipment to regulate volume and sound quality of a broadcast; *video control engineers* regulate brightness, contrast, and visual quality. *Transmitter operators* monitor and log outgoing signals and operate transmitters. *Maintenance technicians* set up and maintain electronic broadcasting equipment. *Field technicians* or *field service engineers* set up, operate, and maintain equipment outside the studio, including portable transmitting equipment and stationary transmitters on towers.

Camera operators set up and operate studio cameras, which are used in the television studio; and electronic news gathering cameras, which are mobile and used outside the studio when a news team is pursuing a story at another location. Camera operators need training in video as well as some experience in television production.

Master control engineers ensure that all of the radio or television station’s scheduled program elements, such as on-location feeds, pre-recorded segments, and commercials, are smoothly transmitted. They are also responsible for ensuring that transmissions meet Federal Communications Commission (FCC) requirements.

Technical directors direct the studio and control room technical staff during the production of a program. They need a thorough understanding of both the production and technical aspects of broadcasting, acquired as a lighting director, camera operator, or in another position.

Assistant chief engineers oversee the day-to-day technical operations of the station. *Chief engineers* or *directors of engineering* are responsible for all the station’s technical facilities and services. These workers need a bachelors’ degree in electrical engineering, technical training in broadcast engineering, and years of broadcast engineering experience acquired in less responsible positions.

Table 1. Employment of wage and salary workers in radio and television broadcasting by occupation, 1998 and projected change, 1998-2008

(Employment in thousands)

| Occupation | 1998 | | 1998-2008 Percent change |
|--|--------|---------|--------------------------------|
| | Number | Percent | |
| All occupations | 247 | 100.0 | 2.5 |
| Professional specialty | 123 | 49.9 | 5.4 |
| Announcers | 44 | 17.9 | -6.7 |
| Actors, directors, producers | 22 | 8.8 | 19.9 |
| News analysts, reporters and correspondents | 19 | 7.6 | 4.7 |
| Photographers and camera operators | 14 | 5.8 | 19.3 |
| Writers and editors, including technical writers | 6 | 2.4 | 4.7 |
| Marketing and sales | 34 | 13.7 | 4.7 |
| All other sales and related workers .. | 29 | 11.7 | 4.7 |
| Marketing and sales worker supervisors | 5 | 1.9 | 4.7 |
| Executive, administrative, and managerial | 30 | 12.0 | 2.4 |
| General managers and top executives | 9 | 3.6 | 1.6 |
| Advertising, marketing, promotions, public relations, and sales managers | 5 | 2.1 | 4.7 |
| Management support occupations ... | 5 | 1.9 | 3.0 |
| Communication, transportation, and utilities operations managers | 3 | 1.3 | 4.7 |
| Technicians and related | 28 | 11.3 | -4.1 |
| Broadcast and sound technicians ... | 23 | 9.2 | -5.8 |
| Engineering technicians | 3 | 1.4 | 4.7 |
| Administrative support, including clerical | 27 | 10.8 | -5.7 |
| Secretaries | 4 | 1.7 | -16.7 |
| General office clerks | 4 | 1.6 | 5.7 |
| Receptionists and information clerks | 3 | 1.4 | 4.6 |
| Office and administrative support supervisors and managers | 3 | 1.3 | 1.8 |
| Bookkeeping, accounting, and auditing clerks | 3 | 1.0 | -14.7 |
| Precision production, craft, and repair | 3 | 1.3 | -3.5 |
| All other occupations | 2 | 0.9 | -2.7 |

Sales and marketing occupations. Most of the workers in this category are *sales representatives*, sometimes known as *account executives*. They sell advertising time to sponsors, advertising agencies, and other buyers. Sales representatives must have a thorough knowledge of the size and characteristics of their station’s audience, including income levels and consumption patterns.

Large stations generally have several workers who spend all of their time handling sales. *Sales managers*, who may handle a few large accounts personally, supervise these workers. If the station is large enough, *researchers* may be employed to collect and analyze statistics and other market information on the community being served. In small stations, part-time sales personnel or announcers often handle sales responsibilities during hours they are not on the air.

General administration. *General managers or station managers* coordinate all radio and television station activities. In very small stations, the manager and a bookkeeper may handle all the accounting, purchasing, hiring, and other routine office work. In larger stations, the general administrative staff includes business managers, accountants, lawyers, personnel workers, public relations workers, and others. They are assisted by administrative support workers such as secretaries, typists, bookkeepers, clerks, and messengers.

Training and Advancement

Professional specialty, management, and sales occupations generally require a college degree; technical occupations often do not. It is easier to obtain employment and gain promotions with a degree, especially in larger, more competitive markets. Advanced schooling is generally required for supervisory positions—including technical occupations—having greater responsibility and higher salaries.

Entry-level jobs in news or program production increasingly require a college degree and some broadcast experience. Approximately 450 colleges offer formal programs in journalism and mass communications, including programs in radio and television broadcasting. Some community colleges offer 2-year programs in broadcasting. Broadcast trade schools offer courses which last 6 months to a year and teach radio and television announcing, writing, and production.

Individuals pursuing a career in broadcasting often gain initial experience through work at college radio and television stations or through internships at professional stations. Although these positions are usually unpaid, they sometimes provide college credit or tuition. More importantly, they provide hands-on experience and a competitive edge when applying for jobs. In this highly competitive industry, broadcasters are less willing to provide on-the-job training, and instead seek candidates who can perform the job immediately.

Some technical positions require only a high school diploma. However, many broadcast stations seek individuals with training in broadcast technology, electronics, or engineering from a technical school, community college, or 4-year college. An understanding of computer networks and software will become more important as the industry introduces more digital technology. Supervisory technical positions and jobs in large stations generally require a college degree.

The Society of Broadcast Engineers (SBE) issues certification to technicians who pass a written examination. Several classes of certification are available, requiring increasing levels of experience and knowledge for eligibility. The Telecommunications Act of 1996 mandated that the FCC drop its licensing requirements for transmitter maintenance; SBE certification has filled the void left by the elimination of this license.

Employees in the radio and television broadcasting industry often find their first job in broadcast stations serving smaller markets. Competition for positions in large metropolitan areas is stronger, and these stations usually seek highly experienced personnel. Because many radio and television stations are small, workers in this industry often must change employers to advance. Relocation to communities in other parts of the country is frequently necessary.

Earnings

Weekly earnings in 1998 averaged \$633 in radio and television broadcasting, higher than the average of \$442 for all private industry. As a common rule, earnings of broadcast personnel are highest in large metropolitan areas. Earnings in selected occupations in radio and television broadcasting for 1997 appear in table 2.

Table 2. Median hourly earnings of the largest occupations in radio and television broadcasting, 1997

| Occupation | Radio and television broadcasting | All industries |
|---|-----------------------------------|----------------|
| General managers and top executives ... | \$33.63 | \$26.05 |
| Marketing, advertising, and public relations managers | 23.88 | 25.61 |
| Sales agents, advertising | 13.66 | 14.16 |
| Photographers | 13.17 | 9.61 |
| Producers, directors, actors, and other entertainers | 13.02 | — |
| Writers and editors | 12.66 | 15.69 |
| Reporters and correspondents | 11.18 | 11.23 |
| Broadcast technicians | 10.41 | 11.21 |
| Announcers, radio and television | 8.21 | 8.34 |
| Camera operators, television and motion picture | 8.15 | 9.50 |

The principal unions representing employees in radio and TV broadcasting are the National Association of Broadcast Employees and Technicians (NABET), the International Brotherhood of Electrical Workers (IBEW), the International Alliance of Theatrical Stage Employees (IATSE), and the American Federation of Television and Radio Artists (AFTRA).

Outlook

Employment in radio and television broadcasting is expected to increase only 2 percent over the 1998-2008 period, slower than the 15 percent projected for all industries combined. Factors contributing to the slow rate of growth include industry consolidation, introduction of new technologies, greater use of prepared programming, and competition from other media. Keen competition is expected for many jobs due to the large number of jobseekers attracted by the glamour of this industry. Job prospects will be best for applicants with college degrees and technical training.

Consolidation of individual broadcast stations into large networks, especially in the radio sector, has increased due to relaxed ownership regulations. This trend will limit employment growth as networks use workers more efficiently. For example, a network can produce news programming at one station and then use the programming for broadcast from other stations, eliminating the need for multiple news staffs. Similarly, technical workers can be pooled to maintain equipment at several stations simultaneously.

The introduction of new technology is also slowing employment growth. Conventional broadcast equipment used to

be relatively specialized; each piece of equipment served a separate function and required an operator with specialized knowledge. Newer computerized equipment often combines the functions of several older pieces of equipment and does not require specialized knowledge for operation. This reduces the need for certain types of workers, including those responsible for editing, recording, and graphics creation. In addition, increased use of remote monitoring equipment allows technical workers in one location to operate and monitor transmissions at a remote station.

Employment growth is also being constrained by the increasing use of radio and television programming created by services outside the broadcasting industry. These establishments provide prepared programming including music, news, weather, sports, and professional announcer services. The services can easily be accessed through satellite hook ups and reduce the need for program production and news staff at radio and television stations.

Finally, employment growth will remain relatively slow because broadcasters anticipate decreasing advertising revenues due to increased competition from cable systems; satellite and other pay television services; and from widespread use of the Internet.

However, broadcasting may experience faster employment growth in the area of data services. The introduction of digital transmission will allow broadcasters to start transmitting data such as electronic publications, software, and interactive educational materials. Although the broadcasters who enter the data services market will face much competition from other industries—such as telecommunications and cable and other pay television services—strong consumer demand could lead to employment growth in this area.

Sources of Additional Information

For a list of schools with accredited programs in broadcast journalism, send a request to:

- Accrediting Council on Education in Journalism and Mass Communications, University of Kansas, School of Journalism, Stauffer-Flint Hall, Lawrence, KS 66045.
Internet: <http://www.ukans.edu/~acejmc>

For information on certification of broadcast technicians, contact:

- Society of Broadcast Engineers, 8445 Keystone Crossing, Suite 140, Indianapolis, IN 46240.
Internet: <http://www.sbe.org>

For career information, contact:

- National Association of Broadcast Employees and Technicians, Communications Workers of American (NABET/CWA), International, 501 Third St. NW., Washington, DC 20001. Internet: <http://union.nabetcwa.org/nabet>
- National Association of Broadcasters, Career Center, 1771 N St. NW., Washington, DC 20036.
Internet: <http://www.nab.org>

For employment and salary information, contact:

- National Association of Broadcasters, Research and Planning Department, 1771 N St. NW., Washington, DC 20036. Internet: <http://www.nab.org>

Information on the following occupations may be found in the 2000-01 *Occupational Outlook Handbook*:

- Actors, directors, and producers
- Announcers
- Broadcast and sound technicians
- News analysts, reporters, and correspondents
- Photographers and camera operators
- Writers and editors, including technical writers